



GLAST Monthly PSR

Ground System/Mission Ops

December 2003

Mike Rackley
GLAST Ground Sys/Ops Manager



Accomplishments



- ▶ **Conducted MOC Preliminary Design Peer Review**
 - *Good assessment received from panel – chaired by Cyndi Adams/Code 584 (EOS Control Center Lead)*
 - *Received 10 RFA's, none significant – plan to respond by end Jan*
 - *Associated documents include MOC Level 4 Requirements, MOC Development Plan, MOC Design Document*
- ▶ **Completed Backup Ground Station study and delivered summary slides**
 - *Recommending we plan to use both the GN (Wallops and MILA) and USN (Hawaii and Australia) for L&EO support, GN for long term support*
 - *GN alone doesn't provide adequate support given criticality of L&EO phase*
 - *USN long term is expensive*
 - *BUT, GN requires significant upgrades to be compatible with GLAST, and it is no longer clear that these will be funded by Code 450*
 - *Need to schedule meeting to wrap up and finalize decision*



Accomplishments



► **Conducted Operations TIM**

- *Conducted a successful Operations Technical Interchange Meeting (TIM) the day after the MOC Peer Review*
- *Operations personnel from the MOC, GSSC, LAT IOC and Spectrum Astro were able to support the meeting*
- *Many different topics were covered, but the most significant accomplishment was the progress made in the LAT planning/commanding process, timeline, and products*
 - *Team came to important agreements on the timing and flow of commands and loads to the LAT instrument from the LIOC (through the GSSC and MOC), as well as on the terminology associated with that process*
 - *Affects ICD and Ops Agreement*
- *Detailed minutes and diagrams will be generated and distributed shortly*



Accomplishments



- ▶ **Baselined GSRD and Ops Concept Document Rev 1 update at 12/17 CCB, with a set of requested changes accepted**
 - *Appropriate changes made to GSRD and provided to Jim for baselining*
 - *Ops Concept Document changes in progress*
- ▶ **Generated draft set of requirements for GLAST Ku-band Front-End Processor (GFEP)**
 - *Effort being led by Howard Dew and Ross Cox*
 - *Biggest issue being worked is how to deal with closed vs. open IONET access for RT vs. offline file transfer access to MOC*
 - *Design Peer Review planned for first week February*
- ▶ **Generated draft set of MTS instrument simulator requirements**
 - *Working with John T. and Erik*
 - *Requested FOT to generate comparable set of requirements for spacecraft to give us a complete set*



Accomplishments

- ▶ ***Generated and distributed draft version of Ground System Test Plan***
 - *Covers Ground Readiness Tests and Ene-to-End Tests*
- ▶ ***Reviewed draft MOC contract with Project Management and agreed to make changes to reflect Feb'07 launch date***
 - *Worked schedule mods with Omitron*
 - *Mods to contract being provided to contract office for review and subsequent dissemination with RFP*
 - *Also made changes to SOW – expect to submit to CCB next week*
 - *Several items moved to Contract*



Issues/Problems



- ▶ ***Finalization of MOC contract award to Golbelt Orca***
 - *Need to wrap up approval of RFP documentation and get issued to Goldbelt/Omitron*
- ▶ ***Spacecraft/instrument simulator capabilities and delivery dates***
 - *CTS and MTS dates tied to Feb'07 launch not acceptable*
 - *New dates provided to Joy for incorporation into Spectrum schedule/impact analysis process*



Upcoming Events/Work Items

- ▶ ***Preliminary Design Peer Reviews***
 - *GFEP (Howard & Ross)*
 - *FDS (Mark Woodard)*
 - *LAT IOC CDR*
- ▶ ***Finalize plan for Backup Ground Station approach***
- ▶ ***Close remaining GSRR RFA's***
- ▶ ***Work on/close GSSC and MOC Peer Review RFA's***
- ▶ ***Gen Spacecraft Simulator Requirements and work simulator requirements, plans, schedule, etc. within Project***
- ▶ ***Support Erik in kick-off of T&C Database WG or something comparable***
 - *We have agreement on using ITOS DB formats and on ASTRO-RT ingesting ITOS DB's, but we are now into working the details*
 - *Need to mature the draft T&C Data Format Control Document (DFCD)*



Upcoming Events/Work Items

- ▶ ***Submit GS Project Plan to CCB***
 - *Reflects latest design review approach (preliminary and detailed design peer reviews for each major element, and then a GSDR)*
- ▶ ***Generate Draft Operations Agreement for Ops Roles and Responsibilities***



Rolling Wave Schedule



Activ ID	Activity Description	Current Start	Current Finish	2003		2004	
				NOV	DEC	JAN	FEB
Ground System & Mission Operations							
Ground System Wide Reviews							
Ground System Wide Reviews							
Ground System Preliminary Design Phase							
0117	GSSC Design Peer Review	24NOV03*	24NOV03	█			
0123	MOC Design Peer Review	11DEC03*	11DEC03		█		
0129	Ku Front End Design Peer Review	14JAN04*	14JAN04			█	
0102	LAT IOC Design Peer Review	25FEB04*	25FEB04				█
0103	Ground System Preliminary Design Phase Complete	25FEB04	25FEB04				█
Ground System Wide Documentation							
Ground System Wide Documentation							
0216	Ground System Project Plan-Baseline Ver.	23JUL03A	19NOV03	█			
Ground System Development							
Ground System Development Documentation							
0604	Ground Operations Data Products ICD - Prelim Ver	23JUL03A	07NOV03	█			
0646	MOC/FDF ICD - Prelim Ver	23JUL03A	30JAN04	█			
0661	SC/Ground ICD - Prelim Ver (CDRL 4 From SAI)	23JUL03A	10FEB04	█			
0613	Ground System Verification Plan-Prelim Ver	02SEP03A	14NOV03	█			
0692	Ground Science Data Products ICD - Final Ver	03NOV03	27APR04	█			
0655	Ground Operations Data Products ICD - Final Ver	11NOV03	04MAY04	█			
0713	Ground System Verification Plan - Final Ver	17NOV03	30APR04	█			
0694	MOC/FDF ICD - Final Ver	02FEB04	15JUL04				█
0712	SC/Ground ICD - Final Ver (CDRL 4 From SAI)	11FEB04	26JUL04				█
0209	MOC/Commercial Ground Station ICD - Final Ver	26FEB04	09AUG04				█
Ground System MOC Development							
0631	MOC Requirements Document (SRD)	31JUL03A	06FEB04	█			
0169	Design MOC Document	02JAN04*	30JUL04			█	

Start Date	03APR00	█	█	Early Bar
Finish Date	21DEC06	█	█	Progress Bar
Data Date	01NOV03	█	█	Critical Activity
Run Date	04DEC03 16:16			

GL10

Sheet 1A of 2B

GLAST Ground System
Rolling Wave
Status as of 11/1/03

Date	Revision	Checked	Approved

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Rolling Wave Schedule



Activ ID	Activity Description	Current Start	Current Finish	2003		2004	
				NOV	DEC	JAN	FEB
Ground System SSC Development							
0616	GSSC Design Spec	24NOV03*	03MAY04				
1012	GSSC Verification Plan	24NOV03*	03MAY04				
1015	GSSC Development Plan	24NOV03*	03MAY04				
0994	GSSC Hardware Phase 1 (Single)	09FEB04	01MAR04				
Ground System LAT IOC Development							
1081	LAT IOC (SAS/DPF) Release 2	03NOV03	06DEC04				
Ground System GBM IOC Development							
1039	GBM IOC (DA/MO) CDR	03NOV03*	03NOV03				
1096	GBM IOC Plan - Final	03NOV03	13FEB04				
1099	Prepare GBM IOC H/W Req's/Funct Spec - Draft	03NOV03	17FEB04				
1042	GBM IOC (DA/MO) Release 1	04NOV03	13AUG04				
1102	Prepare GBM IOC H/W Req's/Funct Spec - Final	18FEB04	03AUG04				